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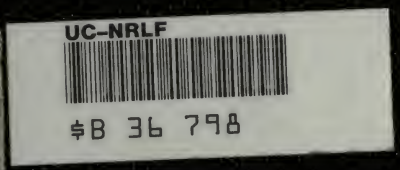

THE VINEYARDS IN ALAMEDA COUNTY

REPORT TO THE

Board of State Viticultural Commissioners

OF CALIFORNIA

1893

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Perhaps a gift.

THE VALUATION OF REAL ESTATE FOR THE PURPOSE OF TAXATION.

—BY—

W. A. SOMERS,

ST. PAUL, MINNESOTA.

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W. A. SOMERS.
Room 33, Met. Opera House.
ST. PAUL, Minn.

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The Valuation of Real Estate for the Purpose of Taxation.

The levy of taxes upon real estate being made in proportion to the assessed value, it is evident that if the assessed valuation gives to each piece of property the same relative proportion of the true value, it will result in an equitable distribution of the burden. The general knowledge of this fact, and the mistaken belief that the assessment is arrived at by taking a percentage of the true value of each piece of property, has led to the acceptance of the practice of using less than the full value in making assessments.

The valuation of real estate for the purpose of taxation is made by individual assessors in small districts, each one being entirely independent of all others, and the assessment so made constitutes the basis for all general tax levies. The original assessment district, being the lowest political organization, say a township, first bears the necessary expenses of the town organization, then, being combined with other townships, villages and cities of the county, becomes the basis for the levy of county taxes. The combination of the counties forms the total assessment for the state, and on this the state taxes are levied.

The assessment changes from year to year with the different ideas of the successive assessors, but always falling further below the full value. The departure from the full value probably has its origin in an effort to place valuations low enough to protect taxpayers from paying more than a just proportion of taxes levied by the higher political organizations. When the departure is once made from the full value, the tendency is constantly downward, for the reason that

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the district assessments being made independently of each other, the districts which are assessed at a higher ratio of the true value than the average will be forced in the next assessment to a lower valuation in self protection. In cases of rapid changes in value—either advancing by reason of increase in population or business, or decreasing from any cause—the assessors will naturally try to protect the interests of their constituents by quickly recognizing any decrease in value, and by being correspondingly slow in recognizing an increase, and thus accelerate the downward tendency.

In any attempt to compare valuations of tracts, the further the general assessment is below the true value, the greater will be the distortion brought about by any inaccuracy in determining the ratio between the true value and the assessment. The inequalities in the actual payment of taxes will be increased by any variation from an exact ratio of the true value between tracts just in proportion as the general valuation of the district is below the true value. Consequently, this continual lowering of the assessed value increases the inequalities and the difficulty of equalization.

When the assessment districts are combined, the inequalities between tracts are just as great with reference to all the higher levies, and the inequalities between the districts themselves may be even greater. As a result, a district may pay much more than its share of the taxes levied by the higher political divisions, and there is no way of demonstrating the discrepancy, because, there being no knowledge of the actual and full cash value of all of the property of the district, it is impossible to compare it with any other district.

When the inequalities become so great, and the injustice of the distribution of the burden so glaring, that public opinion demands a complete readjustment, it is attempted sometimes by making the laws, (which almost universally provide that the assessment be made at the true and full cash value), more stringent, by stating specifically that no lower value shall be used on account of the fact that the valuation is for the purpose of taxation; or, as has been done in

a few cases, providing that after the assessment is made at the full value, a percentage of such full value shall be used for the purpose of taxation.

Such attempted readjustment leaves the assessment subject to all the influences which tend to originate and continue the downward movement, and it is but a question of time when it will once more reach the point where public opinion will demand a readjustment.

Before attempting to suggest methods which will insure greater accuracy, and inspire in the mind of the taxpayer a confidence in the work, a brief consideration of real estate, its uses, and the principles underlying its value, is necessary.

Real estate, as usually defined for the purpose of taxation, is construed to include the land itself, whether laid out in town lots or otherwise, and all buildings, structures and improvements, trees or other fixtures thereon, and all rights and privileges thereto belonging, and all mines, minerals and quarries in and under the same.

Land is useful, first, for what it contains, or may be made to produce, as in the case of lands, which are useful on account of mineral, timber or agricultural resources. The value of this use may be designated Productive Value. Second, it is useful as a site upon which buildings may be erected, or upon which commercial enterprises may be carried on. The value of this use may be called Site Value.

The Productive Value of timber and mineral land will depend upon the quantity, quality and accessibility of the timber or minerals. The Productive Value of agricultural land will depend upon the character of the soil, climate and market. The effect of these conditions may be judged, and a reliable estimate of the Productive Value formed, from a knowledge of the facts.

Site Value is that value which attaches to land on account of its usefulness for home or residence purposes, or on account of its favorable location for commercial uses. In both cases, the physical con-

ditions must be considered, but in the case of land useful for residence purposes, the social surroundings will be the determining factor, and in the case of land useful for business purposes, its accessibility and proximity to centers of business activity will be the important element in determining its value. The weight given to these conditions in determining value is almost entirely a matter of opinion, and being entirely local, can only be intelligently judged by those who are familiar with the social conditions and surroundings, and with the opinions of the majority of the other members of the community.

The Site Value in the case of agricultural lands, especially in districts where farms are occupied by the owners as homes, may be very great, and may differ greatly without regard to the productive power of the land. Many instances will come to mind of lands of equal productive power and reaching the same markets, in one case located near churches and schools and in a desirable neighborhood, and in the other case being in proximity to a brewery or soap factory, in an undesirable neighborhood, where the difference in value is great, owing entirely to the difference in Site Value caused by the different social or local conditions.

Productive Value is the foundation for all value in lands, even when the Site Value reaches a point higher than the greatest productive power of the land, and the Productive Value becomes *nil* locally, as in the business districts of large cities. The climatic conditions may be such that the Productive Value of surrounding lands is great, yet the quality of the soil covering a business lot will not affect its value. Nevertheless, it is evident that this great Site Value only exists because of the concentrated Productive Value of large areas tributary to a common center.

That Site Value is fixed and determined by local opinion may be seen from the fact that the first settler in a wilderness has a distinct opinion of the value of his clearing and home, even though his nearest neighbor be ten miles away, and his opinion must be considered as the controlling element in a sale of the land. His opinion

helps to mould, and is modified by, the opinions of the new settlers going into the district, and the local opinion grows in clearness with the increase in population. The unanimity of opinion will depend upon the social characteristics of the people. The more closely they meet upon common ground, the greater will be the uniformity in their ideas of the value of land. While this uniformity may be developed to a greater extent in one place than in another, still the opinion always exists, and may be found in every locality.

As this opinion is the basis of all purchases and sales, it is evident that it is the true measure of the value of the land, and is the measure which must be used in any successful effort to find the true and full cash value of each piece of property. This opinion may be designated, for convenience, Community Opinion. To define Community Opinion tersely, it is that opinion of values held in common by a majority of the members of a community.

RURAL ASSESSMENTS.

In rural districts and small villages, where the tracts coming within the knowledge of the individual are few, where the social conditions are such that it is possible for each citizen to be familiar with the opinions of the other citizens in regard to values of specific tracts, and where changes in value are so gradual that they may be assimilated into opinion by all of the citizens, Community Opinion is expressed in the value of specific tracts or pieces of property.

To take advantage of Community Opinion, so far as it is developed, and to assist in developing it into an exact expression of value, no change in the present method of dividing the work into small districts, each under an independent assessor, is necessary.

The first step toward this is the gathering, by the assessor, as a

part of his regular duties, of a complete description of each tract, showing the number of acres in each of the different classes of land, some idea of the topography, and a careful description of the improvements. To accomplish this with slight increase of labor and cost, the work must be reduced to a system, in which the gathering and recording of the information will not be burdensome, but which will tend rather to relieve the burden of the work by prescribing limits that will take away the uncertainties of guessing at values.

The secret of successful work in handling great numbers of similar things, either material or conditions, lies in reducing the labor connected with it to such movements or thoughts as may become mechanical. In the manufacture of kitchen chairs, one man, with the aid of machinery, produces the rounds in immense quantities. Another man produces some other part of the chair, and the division of the work between men renders the labor of each man mechanical, and the chairs are manufactured at a cost far below what it would be were they made without this division.

If an assessor should undertake to go on the ground and examine each farm, and write down in his own words a description, the work would be interminable and the report would be of no value, for the reason that the work of compiling and arranging such a mass of information into any form which would be of value, would be greater and more costly than the entire assessment under a proper system. To reduce the work to a system which can be handled by the assessor without extra labor, and which can be utilized when the work of the assessor is completed, blank forms must be used, with questions arranged in natural order, each one complete in itself and positive in its nature, so that all the facts may be gathered as nearly mechanically as possible, and in such form that their compilation can be accomplished with the least possible labor.

A four-fold form, arranged in shape to be easily handled, offers the best arrangement for the use of the assessor in gathering the information. This form as received from the county auditor should

show on the first page a map with the tract in question located in reference to the government subdivisions, with a technical description of the property, the owner's name, etc. It should be the duty of the county auditor to prepare a form in this manner for each tract, and these folders would take the place of the book as now used.

A practical illustration of such a four-fold eight-page folder is shown on the succeeding pages, together with explanatory foot-notes. It will be understood that these forms are prepared to illustrate the best method of gathering the necessary information. Forms prepared for use in the New England states would be ill adapted for use in the great grain-growing states of the Northwest, or the cotton producing states of the South. A study of the complete field of work is necessary for the preparation of these forms.

TOWN..... RANGE..... SECTION.....

Square below represents 640 acres.

OWNER.

DESCRIPTION.

NOTE—Above shows first page of folder to be filled out by county auditor, designed to show location of tract, name of owner and description. Page two of folder is left blank so that long descriptions may run over on that page.

Farm is reached by State / County / Town road, built of Stone / Earth in Good / Fair / Bad condition, running Along / Through as shown on map.

FENCING.

Kind.	Rods.	Condition.
Wire,	_____	Good, Fair, Bad,
Board,	_____	Good, Fair, Bad,
Rail,	_____	Good, Fair, Bad,
Log, Brush or Stump,	_____	Good, Fair, Bad,

Farm buildings are located near _____ corner, house, lot and barn occupying about _____ acres, as indicated on map.

WATER SUPPLY.

_____ Lake as shown on map.
_____ Creek as shown on map.
_____ Springs as shown on map.
_____ Well _____ feet deep.
_____ Cistern _____ gallons capacity.

USE OF LAND.

	Acres.	Acres.
Timber Land,	_____	
Swamp Land,	_____	
Pasture Land,	_____	
Total,		_____
Truck Land,	_____	
Grain Land,	_____	
Miscellaneous,	_____	
Total,		_____
Orchard,		_____
Total Acreage of Tract,		_____

NOTE—Above shows third page of folder, designed to bring out a complete description of the farm and its uses. In cases of three modifying words, as "state, county, town," the kind is to be indicated by a circle marked over word. Blank spaces to be filled as necessary.

HOUSE

Dwelling House built of Wood / Brick / Stone on a Stone / Brick / Post Foundation with cellar under Front / Middle / Rear portion.

.....ft. x _____ft. & .....ft. x .....ft. which is.....stories high, &.....ft. x_____ft. which is.....stories high. 1st story_____rooms. 2d story_____rooms.

Roof is of Shingles / Gravel / Slate and is in Good / Fair / Bad condition.

Chimneys set on independent foundation_____

Chimneys set on shelf_____

House is Well / Plainly finished, and is Painted / Unpainted

BARN

_____ft. x _____ft. constructed of Stone / Wood on a Stone / Brick / Post Foundation. Foundation_____ft. high, forming root cellar _____ft. x _____ft. & stable _____ft. x _____ft.

Main Floor contains room for .....Horses / .....Cattle / .....

Wagon Floor is_____ft. x_____ft. Hay loft_____Tons capacity. Grain bins_____bu. capacity.

Roof is of Shingles / Gravel / Slate in Good / Fair / Bad condition, is Painted. / Unpainted

Was built in year_____Estimated to have cost $_____

OTHER BUILDINGS

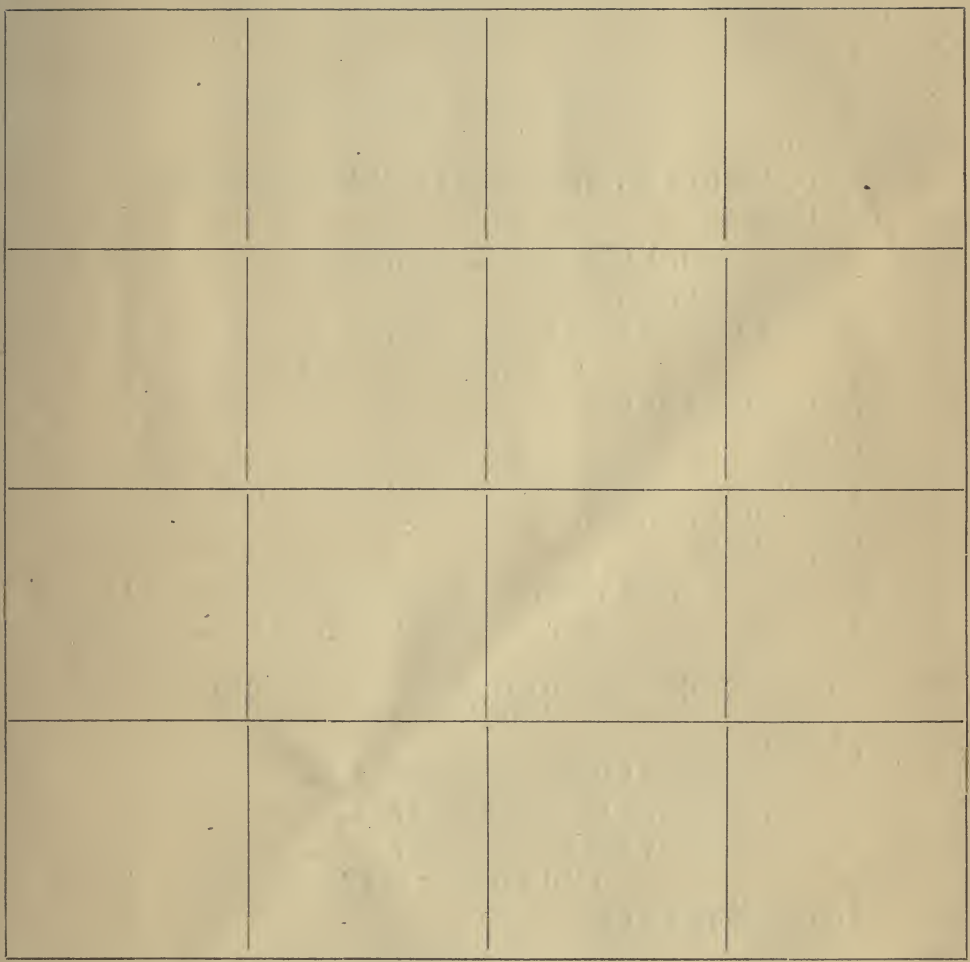
For various farm purposes. Number_____ Estimated to have cost $.....

WIND MILLS

Wood / Steel frame_____ft. high. Tank.....gal. capacity.

Connected by pipes to House / Barn / Outside Troughs

NOTE—Page four of folder, designed to bring out a complete description of the improvements. Same rules for filling out as preceding page of folder.



NOTE—The above represents pages five and six of the folder, showing diagram for convenient location of buildings, creeks, etc., and upon which any important topographical features may be noted.

REMARKS.

VALUATION AS REPORTED BY THE ASSESSOR.

LAND:

_____A, Natural Land at $_____per A, $_____

_____A, Cultivated Land at_____per A, _____

_____A, Orchard Land at _____per A, _____

Total Valuation of Land $_____

IMPROVEMENTS:

House, $_____

Barn, _____

Other Buildings, _____

Wind Mills, _____

Total Valuation Improvements $_____

TOTAL VALUATION $_____

VALUATION AS MODIFIED BY BOARD OF REVIEW

LAND:

_____A, Natural Land at $_____per A, $_____

_____A, Cultivated Land at_____per A, _____

_____A, Orchard Land at _____per A, _____

Total Valuation of Land $_____

IMPROVEMENTS;

House, $_____

Barn, _____

Other Buildings, _____

Wind Mills, _____

Total Valuation Improvements $_____

TOTAL VALUATION $_____

NOTE—Above shows page seven of folder, with blanks for valuation, which explain themselves.

CERTIFICATE.

Certificate of Assessor as required by Law.

NOTE—Page eight of folder, as shown above, is designed to contain Assessor's certificate.

The forms having been filled by the assessor, the next step is to bring the work before the local board of review, by having a map made of the district, on a scale large enough to enable the draftsman to clearly show the outlines of each farm, and to write in on the map a copy of the report of the assessor showing the valuation and area of each of the different classes of land, and the valuation of the improvements. A portion of such a map, showing a section one mile square divided into eight tracts, is given for illustration below.

<table>
<tr><td>JOHN BROWN
etc., etc.</td><td>SAMUEL DUNN
etc., etc.</td><td colspan="3">JAMES SMITH
LAND.
60 a. natural at $20 — $1,200
80 a. cultivated at 35 — 2,800
20 a. Orchard at 50 — 1,000
— $5,000
House $1,000
Barn 750
Other b'ld'g. 500
Wind Mills 80 — 2,330
Total — $7,330</td></tr>
<tr><td colspan="2">HENRY JONES.
etc., etc.</td><td colspan="3">WM. C. STURGIS,
etc., etc.</td></tr>
<tr><td>JOHN DOE.
etc., etc.</td><td>O. JOHNSON.
etc., etc.</td><td colspan="3">SAMUEL BURNS.
etc., etc.</td></tr>
</table>

One or more copies of the map should be posted in the most public places within the district, several days before the meeting of the board of review, to give each citizen an opportuntiy to compare his assessment with every other assessment in the township. The assessor would be required to be in attendance at the meeting of the board of review, with his complete reports, and if any citizen should be dissatisfied with his own or any other assessment, the board of review would have before it the report of the assessor as to the facts upon which the estimate is based, and with the owner present, an examination of the form filled out by the assessor would easily determine if there had been any mistakes made in the description of the land and improvements. If so, they could be corrected by further examination, or through the knowledge of those present.

The maps made in this manner and posted throughout the district would bring the work of the assessor before each property owner and the board of review so clearly and in so simple a form, that it would seem almost impossible for any errors of statement in the description of the land and improvements to escape detection. When it is considered that the assessor and all members of the board of review are citizens and members of the community, selected because of their knowledge of conditions and the confidence of the community in their judgment, it is safe to assume that the valuation as adopted will be an exact expression of the Community Opinion of value.

On the completion of the work of the board of review, a compilation should be made, showing the number of acres of each of the different classes of land, with the highest price per acre, the lowest price per acre, and the average price per acre, and the total valuation of each class. The total valuation of the three classes should then be found, and the total valuation of the improvements added, to give the grand total valuation of the district. This information will be necessary for use in the compilation of the next map in which the district will be combined with other districts and cities, a description of which will be taken up in its proper place.

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CITY ASSESSMENTS.

LAND.

The lots in a city are so numerous, and of such widely varying shapes and dimensions, and the corner influence is such a disturbing element, that Community Opinion as to the value of specific tracts or lots cannot be formed. The tract of land which constitutes an ordinary farm in the rural district will in the city be divided and subdivided into a thousand lots, and one of these lots situated in an important corner may be worth twice as much as a lot of the same dimensions adjoining, but which has only one street frontage.

The social conditions of a modern city are such that the citizen chooses his circle of friends from the entire city, aiming to secure those with kindred tastes rather than those whose only claim is their physical proximity. While the citizens composing such a circle of friends may own their own homes, the comparison of views will more often be of the value of houses and other improvements than of the land itself, and the opinion of each individual as to land values will be limited to very few tracts.

The changes consequent upon the growth of a city are frequently so rapid that Community Opinion of values of specific tracts cannot be formed and assimilated. On account of this uncertainty, or lack of uniformity of opinion as to city values, the speculator sees an opportunity to buy from one for less than he can sell to another, which speculation magnifies the natural and justifiable changes, and in many cases results in apparent depreciation. This makes it impossible for anyone except those who are directly in contact with the real estate business, and who make the conditions a constant study, to form any opinion whatever of the value of specific tracts.

Notwithstanding the fact that Community Opinion does not exist in cities as to values of specific tracts, there does exist a Community Opinion which is just as definite and valuable for the purpose of taxation as though it extended to specific tracts, and which has elasticity enough to conform to growth, no matter how rapid, and to changes caused by shifting of business or residence districts. This is the opinion of the relative value of streets, and is Community Opinion formed by those familiar with the streets. The question of their relative importance and value is a never failing theme of conversation between the citizens, and tends to bring about a uniformity of opinion, and makes it truly Community Opinion.

There always exists in cities a Community Opinion that a certain street is the best for business, and a consequent idea that land fronting thereon is the most valuable. From this most valuable street other streets of less value will be compared, a well defined opinion being present that the property on the less valuable street is less valuable just in proportion as the street is less valuable, and the comparison will reach out from the central or best portion and embrace the entire city. The citizen from having his circle of acquaintances scattered over the city, and from his constant use of the streets, will necessarily form an idea of the comparative value of the streets, and no matter what changes occur in the city on account of growth or changes in business or residence sections, the streets will register the changes to the citizen who daily frequents them as truly as the thermometer registers the changes in temperature.

To make use of this Community Opinion of the relative worth of the streets, it is necessary to find some common term that can be used to express their comparative value as a unit in all parts of the city. The value of one foot in width for some fixed depth is the best measure for this purpose, because of its common use and its applicability both to gauge comparative value of streets and real value of tracts. Starting with the value of such a unit on the best street and of the most valuable property, pushing out always along the lines

of the most valuable, the work of recording these units will be easy of accomplishment.

By assuming in every case that the unit of one foot frontage is located in the center of a block, that is, half way between the cross streets forming the block, the most disturbing element, viz., the corner influence, will be entirely eliminated from the problem, and the judgment required in fixing the value of the units will be reduced to a simple comparison of street values.

Provided the value of the units has been fixed at the true and full cash value of the property, the most delicate shading of difference as to comparative value of streets may be accurately recorded in dollars, and any citizen can quickly and easily compare the work and judge of its accuracy, both as to the relative value of the streets and the actual value of the property.

The work of fixing the units can be best accomplished through a committee of citizens to determine the most valuable part of the city, and indicate by marking upon maps prepared for the purpose, the value of the units, or the value per front foot for a certain fixed depth in the middle of each side of each block, within the district selected. Then other maps should be prepared of districts surrounding and adjoining the central one, upon which should be marked the value of the marginal units fixed in the first or central district. New committees selected for these districts will have to guide them the values as fixed in the central district, and their work will be to extend these proportionate values over their respective districts.

On the completion of this second group of districts, all members of the various committees will come together with their maps, and the trifling inequalities and discrepancies occurring along adjoining lines may be quickly and satisfactorily corrected, and any errors or careless work that may have occurred in any district will be easily detected and corrected.

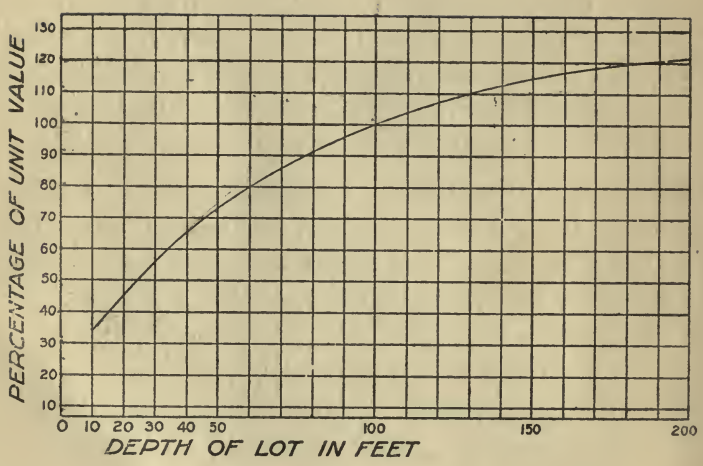
In large cities it may require several groups of districts to cover the whole city, in which case each group should be made complete

and finished before an attempt is made to fix the value of units in the next larger group. As the work spreads from the center and reaches into the less valuable property, the districts may be made much larger without adding to the work of the committee, because of the greater uniformity in values.

All questions of inaccuracy of judgment must be tested by an examination of the unit values recorded on the map. Any taxpayer, by an examination of the unit values, can very quickly learn the relative difference between the assessment of his property and any other property in the city, knowing that the values recorded indicate the value per front foot for the same fixed depth in all parts of the city. It is therefore necessary that this map, or copies of it, should be made records accessible to all citizens and taxpayers.

The unit values being fixed for a certain depth, while the lots themselves may vary in depth, it is necessary to determine the ratio of the unit value to be used for different depth. The different uses of the property will require the use of different ratios. For example, a very shallow lot in the retail district is worth a greater proportion of the unit value than a similar lot in the wholesale district. However, it will be found that three sets of ratios will cover all the different conditions.

The difference between properties used for different purposes, and the relative value of different depths, are practical questions which must be determined by the committees already formed. They should be called upon to fix the ratio for several different depths of lot in each class of property, as the foundation for the construction of scales, by the use of which the same relative proportions can be read for any depths between the points thus fixed. By the use of the scale to determine the frontage value, the value of any lot may be ascertained by a simple multiplication of the width of the lot by its frontage value. An illustrative scale is shown on next page.



Scale A, showing percentage of unit value to be used for different depths of lots in a retail business district, 100 feet being the depth of unit.

The point of intersection of the line indicating the depth of lot with the curved line will show on the horizontal lines the percentage of the unit value to be taken for that depth of lot. The following are examples, based upon a unit value of $1,000:

100 feet in depth reads 100%.....$1,000 a front foot.
60 feet in depth reads 80%..... 800 a front foot.
140 feet in depth reads 113%..... 1,130 a front foot.

The subdivision of the blocks being made before the building of the city, in many cases the business growth has not followed the ideas of the original surveyors, and the best business streets may be what was originally laid out for cross streets. As a result, the corner influence must be considered to affect an equal frontage on each street forming the corner, and therefore becomes a square. In practice, it will be found most convenient to assume that it covers two lots. The corner lot is very largely affected by the value of the cross street, the lot next to the corner will be affected, but to a much smaller degree, while the third lot will not come within the corner influence.

Referring to Diagram 1, the squares affected by the corner influence correspond to the squares A, B, C and D. The frontage value of the unit is shown on this diagram on each side of the block. It is evident that corner A is more valuable than corner C because of the difference in the frontage values of the two streets forming these corners. It is equally clear that corner B is not worth as much as corner A, although they both have an equal frontage on the same street which is valued at $1,000 a foot, because the cross street bounding corner B is worth only $500 a foot, while the other cross street is worth $800 a foot.

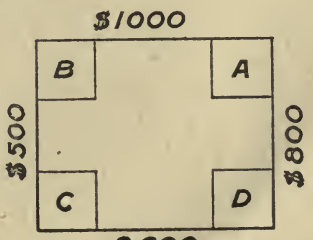


DIAGRAM No1

To make the unit values the basis for determining the value of the corner it is necessary to get an expression of opinion from the committees of the value of a corner under several different conditions, or values of cross streets, as a foundation for the construction of scales by which this opinion may be applied to the determination of the value of any lot or subdivision of a lot coming within the corner influence.

Two or three sets of scales are necessary because of the different uses of the property. In a retail district the corner properties are relatively more valuable because, where each passer is a possible customer, the facilities for attracting attention afforded by the double frontage are very valuable, while in a wholesale district this double frontage adds to its value only on account of additional light and accessibility.

As it seldom occurs that a corner square is held as one tract,

and the most common subdivision of the corner is into two lots, which may be formed by a line running either parallel with, or at right angles to, the best street, scales must be constructed to show the value under both of these conditions. The necessity for this will be clearly understood by reference to Diagrams No. 2 and No. 3,

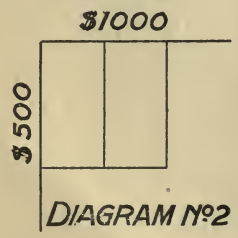


DIAGRAM Nº2

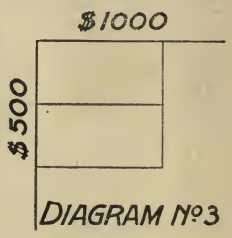


DIAGRAM Nº3

which are intended to show the same corner square, No. 2 being divided by a line running at right angles with the more valuable street, while No. 3 is divided by a line running parallel with the more valuable street. In the case of the division as shown in No. 2, both lots have an equal frontage upon the better street, and while the corner lot is worth considerably more than the inside lot, the difference is not so great as in the case shown in Diagram No. 3, where the inside lot has no frontage on the better street, while the corner lot has its long frontage on the better street, making it a much more valuable lot than the inside one.

The construction of the scales must be made to meet the conditions. It is easily imaginable that in a very valuable section of a large city it would not only be desirable, but necessary, to arrange the scales to read to a much smaller division of the corners where the actual ownership is frequently smaller than the standard lot, and where the values are so great that inaccuracies liable to occur by attempting an adjustment of the values without the use of scales corresponding to the divisions, would cause serious inequalities in the assessment. The scales may be constructed to give the value of any rectangular piece coming within the corner influence. A scale for testing the work is also used, by which the total value of a corner square may be read, so that any inaccuracies occasioned by

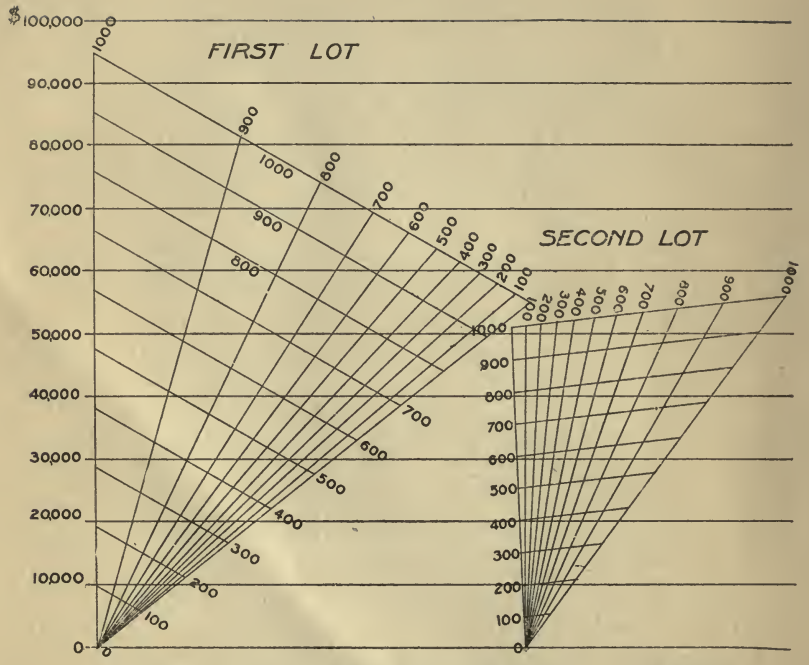
irregular divisions will be detected. Illustrative scales are shown on succeeding pages.

It will be remembered that in each case the committee is called upon to fix the value of lots under several different conditions, and from the values thus fixed the scales and rules are constructed and formulated by which the values of specific tracts throughout the city are determined.

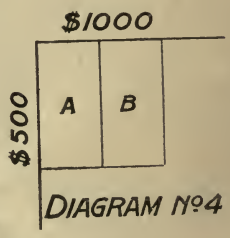
The fact must not be lost sight of that these scales are merely the most convenient tools that can be used for this purpose, and are not arbitrary indicators of value.

The unit values having been determined and marked upon the map upon each side of each block throughout the whole city, and the necessary rules and scales, based upon the Community Opinion of value as expressed through the committees, having been formulated and constructed, the actual assessment of the value of the land is completed. The balance of the work, that is, the determination of the value of each particular tract throughout the city, is purely clerical, and may be computed by anyone having a knowledge of the rules and understanding the use of the scales.

An assessment to be successful must be satisfactory to a great majority of the members of the community. This can only be attained through their general knowledge of the work, and confidence in its justice and equity, and no matter how carefully and accurately the work may actually be carried out, unless the methods used inspire this confidence, the work will not be satisfactory. The method of dividing the work among a number of committees. consisting of citizens qualified to judge, and who have the confidence of the community. will result in giving the best possible expression of the comparative street values. The fact that the unit values are fixed and marked upon the map without regard to the size, shape or ownership of the lots, and the further fact that these figures are always accessible by the public, precludes the possibility of one property owner being favored at the expense of another, and must tend to create in the minds of all citizens a confidence in the justice and equity of the work.



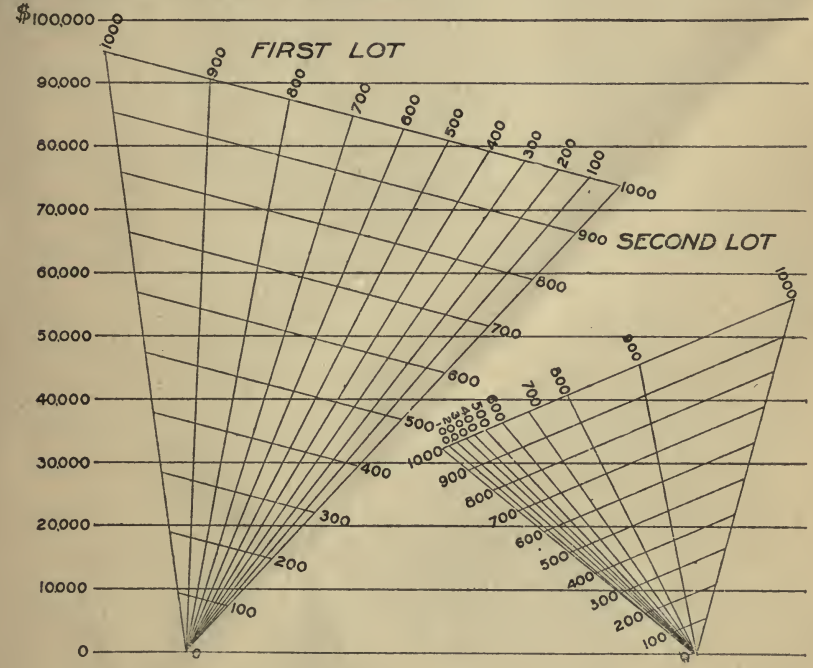
CORNER SCALE B, for finding value of two lots short frontage to better street, as shown on Diagram No. 4.



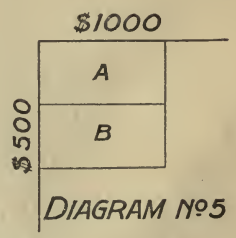
These scales should be constructed upon paper engraved with horizontal parallel lines to indicate the value in dollars, as marked on the margin of the scale. The larger triangle, marked "First Lot," is to give the value of the corner or more valuable lot Marked A on the diagram, and the smaller triangle is to give the value of the inside or less valuable lot, marked B on the diagram.

The ten parallel lines marked from 100 to 1,000 at their lower ends, are used as indexes corresponding with the values of the better street from $100 to $1,000. The eleven lines radiating from the zero point at the bottom of the scale, and crossing the parallel lines referred to, correspond to the values of the less valuable street. The first, or zero, line has no value, the second line corresponds to a street of one-tenth the value of the better street, the third line corresponds to a street having two-tenths the value of the better street, and so on to the eleventh line, which corresponds to a case in which the streets are of equal value. This explanation applies to all the corner scales.

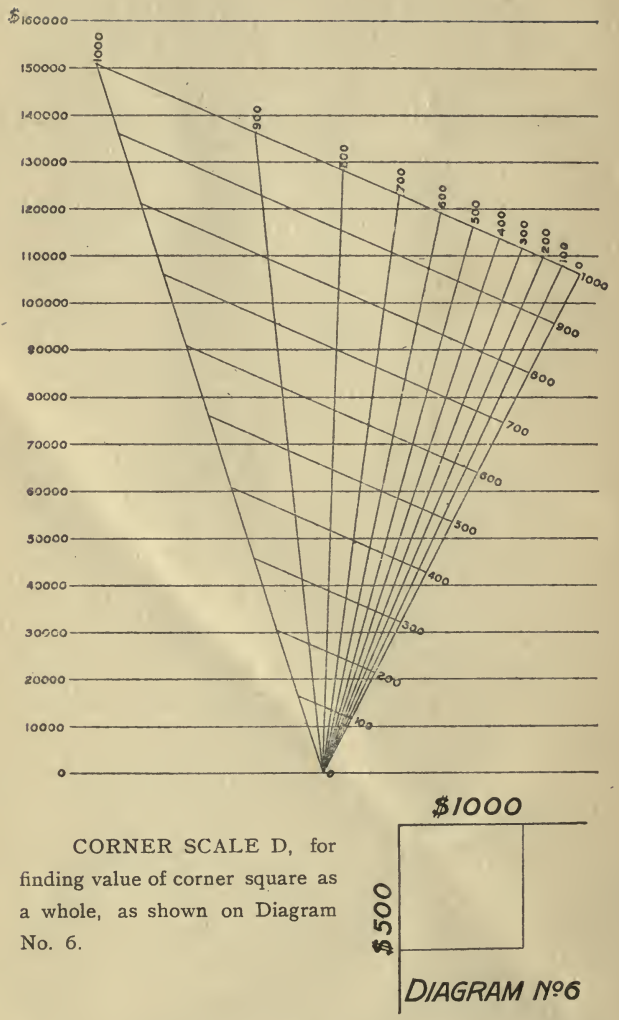
To find the value of Lot A, as shown on the above diagram, the unit values being fixed as marked, the best street being valued at $1,000; on the scale marked "First Lot" find the parallel line corresponding to this figure (marked 1,000), follow this line upward to its intersection with the radiant line corresponding to the value of the cross street—500. This point of intersection falls between the $60,000 and $70,000 horizontal lines, and reads, if the scales were large enough to show the divisions, $63,500. To find the value of Lot B, read in the same manner from scale marked "Second Lot," from which it will be found that the value is $52,500, making the total value of the square $116,000.



CORNER SCALE C, for finding value of two lots short frontage to street of less value, as shown on Diagram No. 5.



To find on these scales the value of Lots A and B follow the rules given on preceding page, which will give the value of Lot A as $81,000, and the value of Lot B as $35,000, making the total value of the square $116,000.



CORNER SCALE D, for finding value of corner square as a whole, as shown on Diagram No. 6.

The value of the corner square, with values indicated as shown on the accompanying diagram, is found in the same manner as in the preceding cases, by following up the 1,000 parallel line to its intersection with the 500 radiant line, which point indicates the value on the horizontal lines as $116,000.

The value of the corner square being fixed by the unit values of the streets forming the corner, it is evident that the division or

subdivision of the square does not change its value. Therefore, the fact that the scales give the same total in each case demonstrates their accuracy.

The scales shown herewith are for illustrative purposes. Scales for practical use should be large enough to admit of marking the values of intermediate cross streets along each parallel line, by which the value of any corner bound by streets of units of $1,000 or less, may be read.

IMPROVEMENTS.

The work of placing valuations on the buildings of a city is chiefly difficult on account of its magnitude. The cost of reproduction, rather than the original cost, is a determining factor of importance, and in respect to any one building may be easily obtained through the estimates of architects and contractors. Two other important factors enter into the determination of the value of city buildings—viz., probable period of usefulness and present utility. The judgment of the former must be largely based upon the facts brought out by a careful examination of the structure as to its physical condition and its fitness for the position it occupies. The value of the use of the structure, measured by the rents which may be received for its use, is the best guide to the value of its present utility.

In the valuation of city buildings for the purpose of taxation, however, the expense of employing experts, on account of the great number and variety of structures, is prohibitive, and it is necessary to devise a method which will give the same good results at a comparative small expense.

A "Building Slip" containing questions which may be easily answered and arranged in such a manner that the answers may be quickly recorded, and which, when answered, will bring to the hand of the assessor the knowledge necessary to the formation of a reliable opinion of value, offers the best means for overcoming the difficulty of the great mass of the work.

A form of building slip arranged to cover the most numerous and common structures of a city, is shown on page 31. A little different arrangement of questions will be necessary to bring out the

information in cases of different classes of structures. On page 32 is a copy taken from the records in the Assessor's office at St. Paul, Minnesota, showing a slip as filled out by one of the examiners, and to show the information contained in this report the following reading of the slip is given.

READING OF BUILDING SLIP.

Examined Apr. 20, 1896. Is a single house, No. 240 Laurel Ave., constructed of wood, upon a stone foundation, main floor being 4 ft. above general surface of ground. Front of the house 27 ft. wide; this width extends back 39 ft. Then it is 18 ft. wide, extending back 11 ft., all of which is 2 stories high. There is one 1-story bay-window, and one two-story bay-window. Front porch is 9x26, a side porch 6x15, and rear porch 5x11. Roof is of shingles, built in form of a gable. Outside finish of siding with plain wood trimmings and there is a cellar under whole house, in which there are located a furnace, laundry room and rooms for vegetable storage. First story is divided into a hall, parlor, sitting room, dining room and kitchen. Second floor contains four bed rooms and bath-room. One room in the attic, unfinished. The inside finish of main part of lower story is plain pine finished in oil. Upper story the same. Heating system, hot water. Building is supplied with city water with faucets in yard, first and second floors, one bath-room, one closet, one sink and a faucet in barn. It is connected with city sewer system.

Building is in good repair and is occupied by owner, who estimates that it would rent for $50 per month, and who states that the building was constructed in 1890.

The barn on the lot is constructed of wood, 36 ft. wide by 18 ft. deep, 1½ stories high, containing three stalls and one living room.

In front of the lot is a side walk made of cement with a granite curb in good condition. Surface of lot is level and about two feet above grade of street.

The slips are so simple and the work of gathering this great mass of information is by their use reduced to such a system, that the cost is small and the work may be performed by men of no special training. A builder is the only expert necessary for the work, and the slips being of the same size, printed in the same manner and filled out according to the same rules, the builder, with a careful analysis of a few of them and accurate estimates of the buildings covered, can quickly arrange the slips in classes or grades of

Description of the improvements on property described on line, page, book, district, examined April 20, 1896.

Single house, one side of double house, flats for .....families, one of row.

No..... ..... St., Ave.,

Material.—Wood, stone, brick, veneer, concrete, upon a foundation of stone, brick, concrete, posts,—the main floor being feet above the general surface of ground.

Dimensions.—Wide, deep, wide, deep, wide, deep, wide, deep, story high with an L add'n wide deep story high.

Projections.—One story, bay window two story, bay window three story, bay window tower front porch side porch rear porch

Roof.—Shingles, gravel, slate, tile, tin. Hip, gable, flat, mansard.

Outside finish.—Siding, shingles, brick, common, pressed; stone, cut, rough. Trimmings, plain, ornamental, stone, metal, wood.

Divisions.— Basement, cellar, under whole, front, middle, rear, containing dining room, kitchen, furnace, laundry, vegetable storage.

Rooms

1st story, hall, parlor, sitting room, library, dining room, kitchen, bed room.

2nd story, bed room, bath room, sewing room, other rooms,

3rd story, bed room, other rooms, Attic, rooms finished, unfinished.

Inside finish.—Main part, lower story, ornamental, plain, hardwood, pine, oil, paint. Upper story, hardwood, pine, oil, paint.

Heating.—Stoves, furnace, hot water, steam, combination.

Water.—Well, cistern, city, in yard, basement, first story, second story, bath tub, water closet, wash basin, laundry tray, sink, barn.

Drainage.—Cesspool, sewer. Building in good, fair, bad, repair. Vacant, occupied, owner, tenant, who estimates, pays, rent at $ per month. States building was constructed in 18

Owner. Agent.

WRITE NAME OF OWNER OR AGENT HERE

WRITE RESIDENCE OF OWNER OR AGENT HERE

Barn.—Wood, brick, stone, wide, deep, stories high, contains stalls, living rooms.

Sidewalk.—Wood, stone, cement, brick. Curb, wood, stone, granite; Condition, good, fair, bad.

Lot surface.—Level, uneven; about feet above, below grade.

See Form No.

(OVER.)

Description of the improvements on property described on line, page, book, district, examined April 20, 1896.

Single house, one side of double house, flats for .....families, one of row.

No. 240 Laurel St. Ave.

Material.—Wood, stone, brick, veneer, concrete, upon a foundation of stone, brick, concrete, posts,—the main floor being 4 feet above the general surface of ground.

Dimensions.—Wide, 27 deep, 39 wide, 18 deep, 11 wide, deep, wide, deep,

2 story high with an L add'n wide deep story high.

Projections.—One story, bay window two story, bay window three story, bay window tower

9 front porch 26 6 side porch 15 5 rear porch 11

Roof.—Shingles, gravel, slate, tile, tin. Hip, gable, flat, mansard.

Outside finish.—Siding, shingles, brick, common, pressed; stone, cut, rough.

Trimmings, plain, ornamental, stone, metal, wood.

Divisions.—Basement, cellar, under whole, front, middle, rear, containing dining room, kitchen, furnace, laundry, vegetable storage.

Rooms

1st story, hall, parlor, sitting room, library, dining room, kitchen. bed room.

2nd story, bed room, bath room, sewing room, other rooms,

3rd story, bed room, other rooms, Attic, rooms finished, unfinished.

Inside finish.—Main part, lower story, ornamental, plain, hardwood, pine, oil paint. Upper story, hardwood, pine, oil paint.

Heating.—Stoves, furnace, hot water, steam, combination.

Water.—Well, cistern, city, in yard, basement, first story, second story, bath tub

water closet, wash basin, laundry tray, sink, barn.

Drainage.—Cesspool, sewer. Building in good, fair, bad, repair.

Vacant, occupied, owner, tenant, who estimates, pays, rent at $ 50. per month. States building was constructed in 18 90

Owner. Agent.

WRITE NAME OF OWNER OR AGENT HERE

WRITE RESIDENCE OF OWNER OR AGENT HERE

Barn.—Wood, brick, stone, wide 36 deep 18 1½ stories high, contains 3 stalls, living rooms.

Sidewalk.—Wood, stone, cement, brick. Curb, wood, stone, granite; Condition, good, fair, bad.

Lot surface.—Level, uneven; about 2 feet above, below grade.

See Form No.

(OVER.)

structures. He can see at a glance whether a slip describes a building which it would cost $5.00 or $1.00 a square foot to reproduce, and it can be placed in the class to which it belongs. Through classifying the work in this manner, the duties of the builder are comparatively simple, and his work will be speedily performed. By this means the great magnitude of the work is overcome, and each improvement is assessed at its true and full cash value as determined by all the influences existing.

COMPILATION OF CITY AND RURAL ASSESSMENTS.

While the city may be divided into many assessment districts, for the purpose of combination with township and village assessments, it is and must be considered as one. After review by the city board of review it will be reported directly to the county auditor, where it should be combined with the village and township assessments, constituting the assessment of the county, to be passed upon by the county board of review.

For this review a map of the county should be prepared, showing in each township the price per acre of the various grades of lands, and if there is any great difference in the character of land in part of a township, a notation should be made on the map to show the difference. In marking the price per acre, the average price should be shown, and also the highest price and the lowest price. If there is a city in the county, its outline should be shown, with the total valuation of the land and the total valuation of the improvements. All villages coming within the county should be shown in the same manner, with the addition that the average price per acre of the lands in the outskirts of the village should be plainly marked.

The county board of review will be composed of representatives from each township, village and city, each one of whom, it is natural to presume, will be thoroughly familiar with the assessment in his own district. The work of the board being to compare the assessment of the several parts of the county, with the idea of equalizing

any differences that may be found, they will have before them on the county map such information, in connection with their individual knowledge, as will enable them to detect any attempt to shirk the burden of taxation and depart from the true and full cash value. As it must be presumed that the distribution within the districts themselves is uniform, a correction can be made by a uniform change of all the valuations of a district.

The same methods of presentation of the assessment to the state board of review by the construction of a state map, will bring out any possible inequalities between counties, which may be easily corrected. This will complete the assessment of all the real estate of a state at the full cash value, and will insure that the various levies of state, county, city, village and township taxes are accurately and equitably levied between the property owners of the state.

To set at rest any doubts as to the practicability of the methods, it is only necessary to call attention to the fact that the assessment of the City of St. Paul and Ramsey County, Minnesota, was made in accordance with the foregoing principles and methods, under the direction of the writer, and proved satisfactory not only to the taxpayers, but to the state board of equalization as well.

In connection with this work there were 25,000 buildings actually measured and their values estimated, and something over 150,000 different lots or tracts of land were examined and valued, covering in the City of St. Paul alone 55 square miles.

The committees of citizens called to assist in this work were composed of 38 prominent, well known and substantial taxpayers. The committees were easily secured, and the members became deeply interested in the work, which they carried out thoroughly and completely by holding some twenty short sessions.

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